MONTANA UNDERGROUND STORAGE TANK PROGRAM NEWSLETTER

MUST News

Department of Environmental Quality

Fall Issue 2007

Emergency Response *to* Gasoline Release

The DEQ would like to give a ***huge thanks*** to the City of Kalispell personnel for their tireless efforts on the emergency response to a gasoline release at Michael's West in Kalispell. On July 23, 2007 the City of Kalispell received a report of gasoline odors near Applegate Way near Meridian Avenue in Kalispell. On July 24, 2007, vapors were again reported by a resident in the same area as the day before and the City of Kalispell quickly sent out a team to investigate. Explosive vapor concentrations were measured in the storm drain system prompting an emergency response. The crew discovered petroleum flowing in the storm sewer and with the aid of vapor readings and a video camera were able to track the source of the free product and vapors back to Michael's West located on the northwest corner of Meridian Avenue and West Idaho Street. It appears that gasoline was able to migrate from Michael's along the on-site sanitary sewer line into the Meridian

continued on page 2

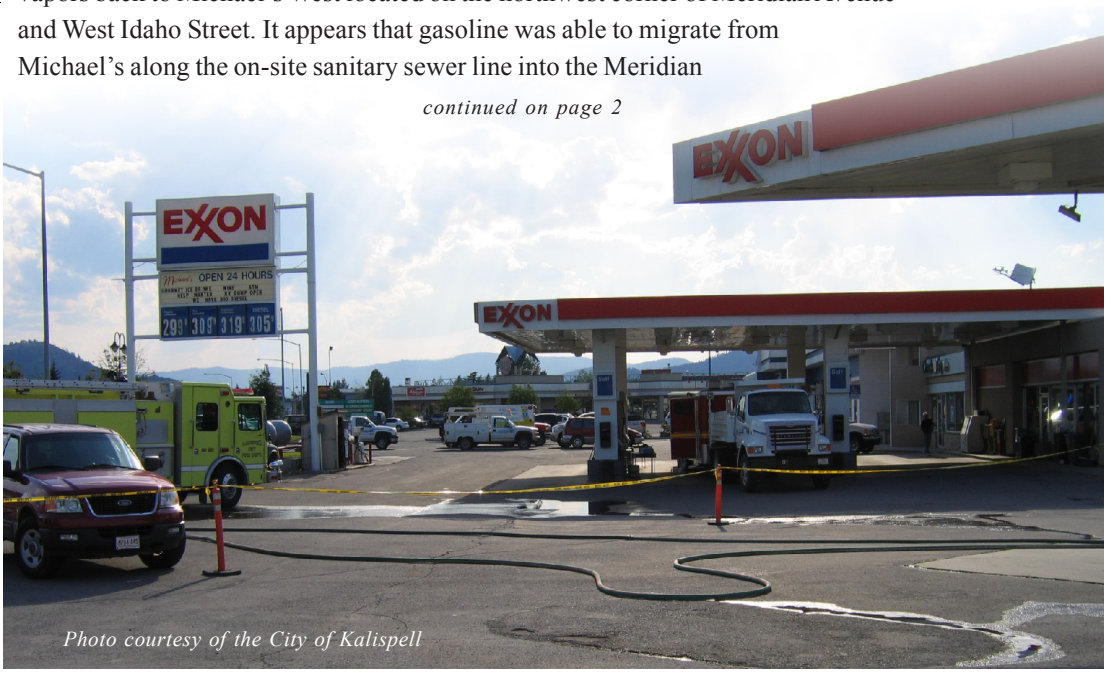


Photo courtesy of the City of Kalispell

Inside This Issue

Montana Department of Environmental Quality

Underground Storage Tank Section
1520 East Sixth Avenue • Helena, MT 59620-0901
Phone: 406-444-5300 • Fax: 406-444-1374
E-mail: ustprogram@mt.gov • UST Web: **www.deq.mt.gov/UST/index.asp**

Petroleum Release Section • Petroleum Tank Release Compensation Board
1100 North Last Chance Gulch. • P. O. Box 200901 • Helena, MT 59620-0901
Phone: 406-841-5016 • Fax: 406-841-5091
Remediation Web: **www.deq.mt.gov/rem/index.asp**

Emergency Response *to* Gasoline Release - *continued from page 1*

Avenue utility corridor. In the corridor, it flowed along the trench bedding plane until it entered the sanitary sewer through joints surrounding the concrete stormwater pipe and collect within stormwater sumps. The city initiated free product recovery by pumping total fluids from the stormwater sump at the intersection of Highway 2 and Meridian Avenue. Adsorbent pads were placed in manholes downstream from the sump to recover additional free product.

Free product gasoline was also found to be discharging from the storm drain into a runoff detention pond southwest of Michael's West and eventually finding its way into Ashley Creek. The Flathead County Emergency Response Team placed and maintained sorbent booms near the storm drain inlet and outfall to minimize further impacts to Ashley Creek.

The City of Kalispell blocked off the southern portion of Meridian Road due to potentially explosive vapor concentrations in the storm drains. One hundred percent lower explosive levels were encountered. The city crew sprung into action to mitigate the very serious threat of an explosion by replacing the manhole covers with grated covers to allow increased air flow through the storm drain allowing the vapors to vent to the atmosphere. Explosive vapors were also mitigated by evacuating vapors from a sanitary sewer manhole using a one horse power regenerative blower.

The city crew continued monitoring the area for several days until their free product and vapor mitigation efforts significantly reduced the threat to the environment and minimized the potential for an explosion. ■

UST Penalty Calculation Changes

DEQ has changed the way it calculates penalties for violations of the Underground Storage Tank Act. The principle changes are that DEQ will no longer assess a minimum and maximum penalty based upon whether or not the violation is corrected, and the table in the rules listing the minimum and maximum penalties has been deleted. Also, DEQ will no longer include an estimate of the cost of correcting a violation in its orders

The reason for these changes dates back to the 2005 Legislative Session when HB428 was passed. This successful legislation standardized the factors DEQ considers in penalty calculations for over a dozen environmental laws. Penalty calculation procedures based on the standardized factors are described in the Administrative Rules of Montana 17.4.301 et. seq. Unfortunately, in writing HB428, DEQ failed to repeal the penalty factors listed in the UST law. Therefore, the new standard factors and penalty calculation rules did not apply to UST violations.

DEQ continued to follow the existing UST penalty calculation rules until after the 2007 Legislature passed HB94. This legislation repealed portions of the UST law that should have been repealed in 2005. As a result of this legislation, amendments to the UST penalty calculation rules were adopted in August 2007, and DEQ now follows the standard penalty calculation rules for determining UST penalties.

The new rules contain the factors which are similar to what existed in the UST law with some notable additions. The new factors are the nature, extent, and gravity of the violation; the circumstances or culpability of the violator; good faith and cooperation; consideration for the amounts voluntarily above and beyond what is necessary to address the impacts of the violation; history of violation; and the economic benefit of noncompliance which relates to the avoided or delayed cost of compliance. It is also important to note that each day of violation constitutes a separate violation.

Our aim in the DEQ Enforcement Division and the penalty calculation rules is to calculate penalties that are commensurate with the severity of the violation. The new procedures eliminate the predetermined penalties that were specified in the old rules and provide a much better explanation of the rationale DEQ uses in calculating a penalty. Hopefully, this article will not mean much to most of you because you continue to operate in compliance with the UST rules.

If you have any questions about the penalty calculation rules, please contact Dan Kenney at (406) 444-1504, or John Arrigo at (406) 444-5327. ■

Petro-Fund Loan Status

The Petroleum Tank Release Compensation Board recently paid off one of its loans. The board borrowed money from the Montana Board of Investments INTERCAP Revolving Loan program in 1997 and 2002. The INTERCAP Program is a low cost, variable-rate program that lends money to Montana local governments, state agencies, and the university system. The Board of Investments issues tax-exempt bonds and lends the proceeds to eligible borrowers.

In early 1997, the board was approved for a $1,515,000 loan, and on July 25 of that year they borrowed $1,212,000 on a ten-year promissory note. Five year years later in 2002, the board was approved for $2,500,000. On August 16, 2002, the board borrowed $1,000,000 on a second ten-year promissory note. Although the notes were based on a variable rate loan program, the average annual interest has been about 5%.

The 1997 loan was retired on August 15, 2007. The loan resulted in $297,694.81 in interest expenses. The annual costs associated with the 1997 loan were approximately $150,000 in principal and interest expense. Now that the loan has been retired, the annual $150,000 expense can be applied toward the reimbursement of claims.

The board is making semi-annual payments on its 2002 loan. It has paid $461,067.33 towards principal and $139,531.49 in interest expense on the loan. This loan costs approximately $130,000 per year in principal and interest expense. The board expects the final payment to be made on August 15, 2012.

The fund has claims totaling over $2 million awaiting payment. The board was recently approved for a $2.5 million Montana Board of Investments INTERCAP Revolving Loan. The board continues to discuss the possibility of borrowing on another ten-year promissory note. Details regarding loan discussions can be obtained from the minutes of the board meetings or by attending one of its' meetings. Information on the board meetings can be obtained from the web site at: http://deq.mt.gov/pet/index.asp. ■

Meet Steve Michels

One of a series of brief get-acquainted articles on Petro Board members.

Steve Michels, 47, a life-long Montana resident, was born and raised in Great Falls. He now lives near Raynesford, about 30 miles east of Great Falls. Steve attended Montana State University-Northern in Havre.

Steve serves on the Petro Board as a representative of service station dealers.

Two of Steve's three girls are on their own, while the youngest is a high school senior. Steve has five years experience as a high school soccer coach.

Prior to acquiring a family-owned service station in Raynesford in 1999 and becoming president of Michels Station, Inc., Steve had 20 years experience as a collision repair tech. He is also a third-generation petroleum distributor.

Steve is an active member in the Belt Cowboy Association, responsible for the Belt Rodeo.

An active member in the Raynesford Volunteer Fire Department, Steve also is a member of the Great Falls Chapter of Walleyes Unlimited. He spends much of his free time hunting, with the help of his two horses and three hound dogs, and fishing. In his pursuit of game, Steve takes annual fall pack trips into the Bob Marshall Wilderness. ■

Operator Training Outreach for Owners and Operators Who Wish to be Involved in Development

By Bill Rule, September 11, 2007

In August of 2005, Congress passed the Energy Policy Act of 2005. One component of that Act requires that operators of underground storage tank (UST) systems be trained in accordance with EPA guidelines. EPA made those guidelines public in August of 2007. Montana has two years to develop Operator Training and three more to train all of the operators.

EPA guidelines require that states develop Operator Training in cooperation with owners and operators. This article first outlines the basic requirements of the EPA guidelines. It goes on to ask questions that are open to discussion as we develop Montana's training.

EPA Guideline Basics:

- State requirements must be consistent with EPA Guidelines.
- State requirements must be developed in cooperation with UST owners and operators.
- State requirements must consider programs implemented by owners and operators.
- State requirements must be appropriately communicated to owners and operators.
- Each facility will need to train a Class A, Class B, and Class C Operator. Those classes are described below.
- A person can be in more than one operator class. For instance, an owner may be a Class A, B, and C Operator.
- Each operator must complete a department-approved training program.
- The training must include a test.
- A test can take the place of classroom or self-study if the state chooses. The test must "reasonably demonstrate that the person tested has the necessary knowledge and skills to be considered competent to operate USTs."
- Class C Operators can be trained and evaluated by Class A or Class B Operators.
- Operators must repeat relevant components of training for significant noncompliance (major violations).
- Operator training requirements must be in place by 8/8/09; operators must all be trained by 8/8/12.

Class A Operators:

A Class A Operator is the individual who ensures someone is conducting the proper operation and maintenance on the UST systems. At a minimum, the Class A Operator must be trained in the following:

- A general knowledge of underground storage tank system requirements so he or she can make informed decisions regarding compliance and ensure appropriate individuals are fulfilling operation, maintenance, and recordkeeping requirements and standards of Administrative Rules of Montana (ARM) Title17 Chapter 56 regarding:
  - Spill prevention
  - Overfill prevention
  - Release detection
  - Corrosion protection
  - Emergency response
  - Product compatibility
- Financial responsibility documentation requirements.
- Notification requirements.
- Release and suspected release reporting.
- Temporary and permanent closure requirements.
- Operator training requirements.

continued on page 5

Operator Training Outreach for Owners and Operators Who Wish to be Involved in Development - *continued from page 4*

Class B Operators:

A Class B Operator is the individual who conducts the operation and maintenance. States may require either site-specific operator training, which is focused only on equipment used at that facility, or broader training regarding requirements for all equipment and methods. At a minimum, the Class B Operator must be trained in the following:

- Components of underground storage tank systems.
- Materials of underground storage tank system components.
- Methods of release detection and release prevention applied to underground storage tank components.
- Operation and maintenance requirements of Montana UST Regulations that apply to underground storage tank systems and include:
  - Spill prevention
  - Overfill prevention
  - Release detection
  - Corrosion protection
  - Emergency response
  - Product compatibility
- Reporting and recordkeeping requirements.

Class C Operators:

Class C Operators include all of the on-site individuals who may be responsible in the event of an emergency. At a minimum, the Class C Operator must be trained to:

- Take action in response to emergencies (such as, situations posing an immediate danger or threat to the public or to the environment and that require immediate action) or alarms caused by spills or releases from an underground storage tank system.

What is open to discussion?

- How will training be delivered to the operators?
- Who will conduct Class A and B training and under what criteria will the department approve those trainers?
- What will be the content of the Class A and B training over and above the minimum as established by EPA guidelines?
- What kinds of tests will be offered?
- How will the tests be administered?
- How will the department certify (register? license?) trained operators?
- Who will train Class C Operators, how will training be delivered and evaluated, and how will that training be documented to the department?

Montana's UST Program is looking for owners or operators who want to help answer these questions. If you want to help, contact Bill Rule at (406) 444-0493 or brule@mt.gov. ■

Fall 2007 Technical Guidance Document Update

Technical Guidance Document #7

Soil and Groundwater Action Levels for Petroleum Releases was revised in August 2007 to reflect changes to the Montana Tier 1 Risk-Based Corrective Action Guidance for Petroleum Releases. Technical Guidance Document #7 can be found on the DEQ website at: www.deq.mt.gov/LUST/TechGuidDocs/techguid7.pdf

The Extractable Petroleum Hydrocarbon (EPH) screen concentration at which fractionation is required has been raised from 50 parts per million (ppm) to 200 ppm based on the revised C9-C18 aliphatic fraction risk based screening level (RBSL).

The extent and magnitude of a release has been defined such that when the investigation through laboratory data obtained from excavations, test pits, or soil borings, etc. demonstrate that the contaminant concentrations are decreasing both horizontally and vertically to where there are no EPH or volatile petroleum hydrocarbons (VPH) RBSL exceedances. Prior guidance indicated that the extent was determined when the contaminant concentration was less than 50 ppm total extractable hydrocarbons.

The EPH versus TEH discussion has been moved to the RBCA Guidance document. Table 1 – Testing Procedures for Soil, and Table 2 – Testing Procedures for Groundwater have been modified to include Oxygenates and Lead Scavengers. The EPH screen concentration at which fractionation is required for groundwater has been elevated from 300 parts per billion (ppb) to 500 ppb based on the revised C9-C18 aliphatic fraction RBSL.

The VPH/EPH Sampling Protocol text, Table 3 – VPH/EPH Sampling Protocol and text sections Soil Sample Collection and Preservation and Aqueous Sample Preservation have been moved to the RBCA Guidance Document.

Technical Guidance Document #8

Laboratory Analytical Requirements for Petroleum Releases Regulated by the DEQ Petroleum Technical Section was revised in October 2007 to reflect changes in RBCA. Technical Guidance Document #8 can be found on the DEQ website at: www.deq.mt.gov/LUST/TechGuidDocs/Techguid8.pdf

The EPH screen concentration for soil has been revised from 50 ppm to 200 ppm and the EPH screen concentration for groundwater analyses has been revised from 300 ppb to 500 ppb to reflect changes in RBCA. Table 1- Testing Procedures for Soils, and Table 2 - Testing Procedures for Groundwater have been expanded to include RCRA Metals and Oxygenates and Lead Scavengers.

Technical Guidance Document #15

The Department of Environmental Quality (DEQ) has revamped the priority ranking system used to rank and categorize DEQ Petroleum Technical Section (DEQ-PTS) sites. The new priority ranking system is explained in the updated draft Technical Guidance Document #15, "Prioritization of Petroleum Release Sites." Technical Guidance Document #15 can be found on the DEQ website at: http://deq.mt.gov/LUST/TechGuidDocs/techguid15.pdf. In brief, Technical Guidance Document #15 states that DEQ-PTS sites are now categorized into eight separate categories, all of which have a specific ranking number. The categories/ranking numbers are as follows:

Priority 1 – High Priority Characterization
Priority 2 – High Priority Remediation
Priority 3 – Medium Priority Characterization
Priority 4 – Medium Priority Remediation
Priority 5 – Low Priority Remediation
Priority 6 – Groundwater Management
Priority 7 – Pre-Closure Assessment
Priority 8 – Pending Closure

For specific criteria regarding each of these priorities, please visit the DEQ website listed above.

continued on page 7

Fall 2007 Technical Guidance Document Update - *continued from page 6*

The most significant change from the old ranking system to the new ranking system is that risk factors are no longer cumulative. Since the Petroleum Tank Release Compensation Board (PTRCB) staff is obligating funds on a priority basis, this means that any site with any impacts or risks to human health will have funds obligated sooner. Under the old ranking system, risk factors were cumulative, and a release may have posed a threat to a drinking water supply, for example, but if that was the only risk factor the site would score low, and funds would not be obligated to the site in a timely manner.

It is the goal of the DEQ-PTS to protect human health and the environment from petroleum releases. Since there are more petroleum releases than adequate staff and funding available to address them all, the DEQ-PTS has had to devise a system for ensuring that those releases that pose the greatest risk to human health are addressed first, and the new priority ranking system ensures that none of these sites are forgotten because of a low priority ranking score. ■

New Requirements for Surveying Groundwater Monitoring Wells

The Department of Environmental Quality is updating Petroleum Release Technical Guidance Document #2 (TGD-2), which addresses the requirements for surveying the location of monitoring wells used to investigate petroleum releases. These updates still reflect the importance of accurately locating all the monitoring wells used in a release investigation to correctly measure groundwater characteristics by requiring a Montana licensed land surveyor or professional engineer to conduct the first survey of monitoring wells. The updates also reflect the value of locating monitoring wells to a standard datum, so data from all nearby investigations can be correlated.

One of the updates in TGD-2 includes the addition of a requirement to locate the monitoring wells in the X-Y Plane or longitude and latitude. While the requirement to locate the vertical elevation to monitoring wells remains at 0.01 (one-hundredth) feet, close to an eighth (1/8) of an inch, the horizontal measurement accuracy of one-foot is now required. In addition, the technical guidance now identifies the long-standing industry standard of using the northern edge of the inside PVC casing as the measuring point for monitoring wells.

The updated guidance also references DEQ's standard for using Global Positioning System (GPS) devices for surveying. Where current technology may not allow GPS units to achieve the vertical measurement of 0.01 feet, today's survey grade GPS units can achieve the 1.0 feet horizontal (X-Y) measurements necessary. Therefore, TGD-2 identifies the World Geodetic System of 1984 (WGS 84) coordinate reference for GPS data as the standard used by DEQ.

Monitoring wells are used to collect many different types of groundwater and subsurface data as part of environmental investigations. Accurate groundwater elevation measurements are essential for determining groundwater flow, and in order to obtain accurate groundwater elevation measurements, it is crucial that wells not only be surveyed with a measurement precision of 0.01 feet, but that the most recent vertical control datum is used. The new requirement for the vertical control datum is the North American Vertical Datum of 1988.

The technical guidance document has been renamed "Surveying Monitoring Wells," and can be viewed at the following DEQ website: http://deq.mt.gov/LUST/TechGuidDocs/techguid2.pdf. ■

Montana Department of
ENVIRONMENTAL QUALITY
P. O. Box 200901
Helena, MT 59620-0901

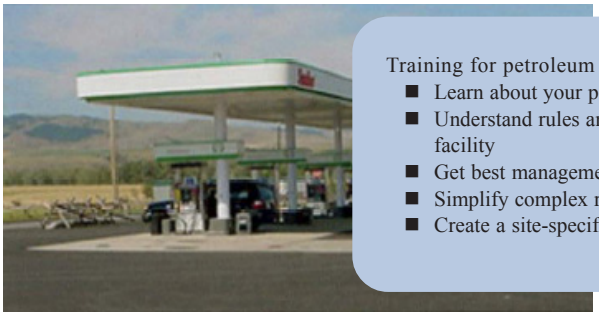
This document printed at state expense. Information on the cost of this publication can be obtained by writing the Department of Administration, Helena, Montana.

printed on recycled paper

Montana TankHelper

Online Underground Storage Tank Operator Training is Free & Easy!

Simply log on to TankHelper, identify your facility and proceed through the service. When you finish, you can print out a plan that will help you manage your underground storage tanks.



Training for petroleum system operators to:

- Learn about your petroleum equipment
- Understand rules and responsibilities for your facility
- Get best management practices
- Simplify complex regulations
- Create a site-specific management plan

tankhelper.mt.gov